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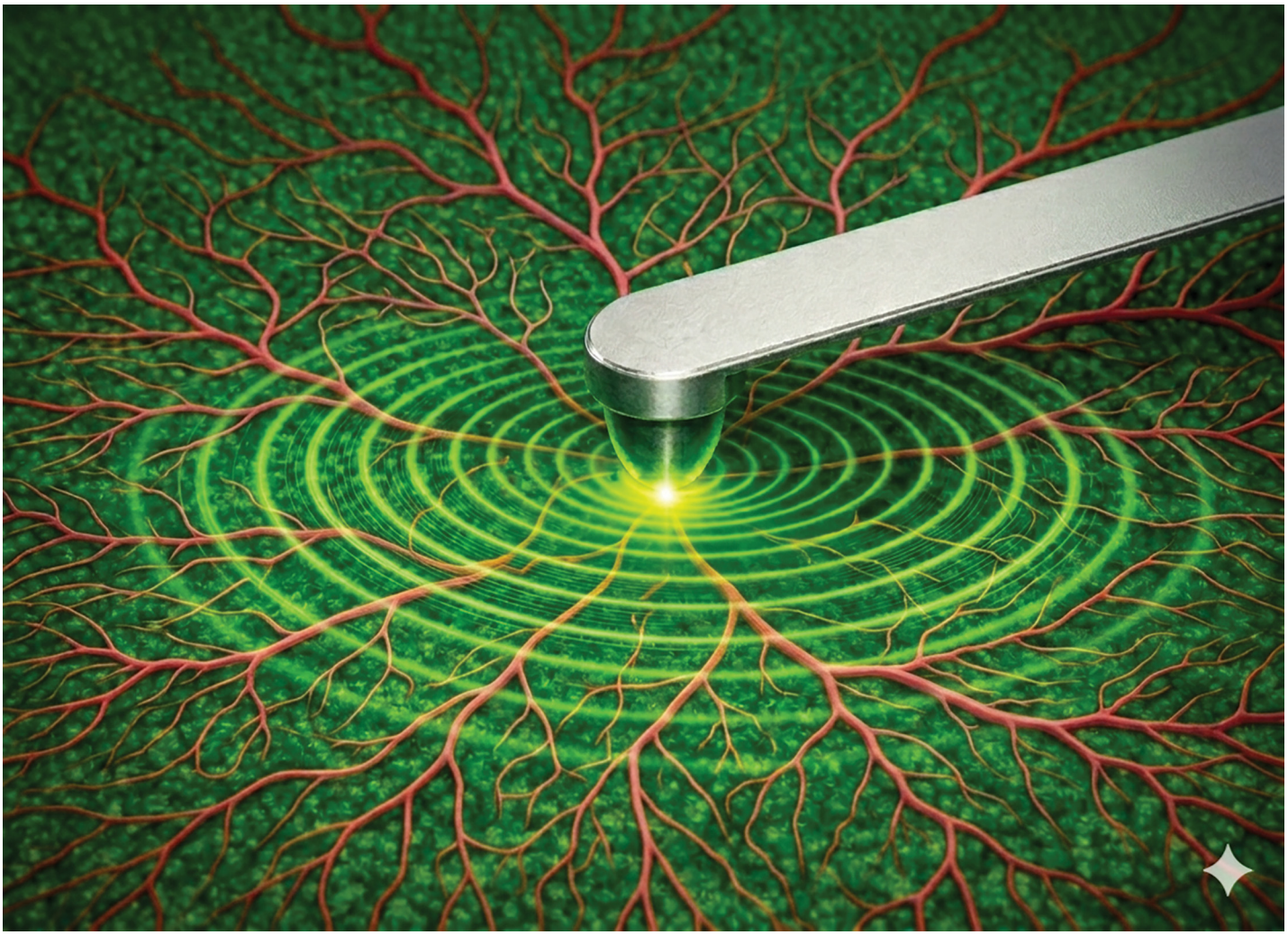

Showcasing research from Professor Sharon Gerecht's laboratory, Department of Biomedical Engineering, Duke University, Durham, North Carolina, USA.

Retina microrheology *via* oscillatory atomic force microscopy

The viscoelastic properties of tissues, specifically elasticity and viscosity, play a central role in development and disease progression. Conventional atomic force microscopy (AFM) indentation approaches, however, provide limited resolution of these complex mechanical behaviors. In this study, we implement oscillatory AFM-based microrheology to quantify both elastic and viscous contributions to tissue mechanics. Our results demonstrate that this approach more effectively characterizes mechanical behavior than standard indentation methods, enabling improved investigation of disease-associated changes and regenerative processes.

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See Sharon Gerecht *et al.*, *Soft Matter*, 2026, **22**, 2629.

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